II. REMARKS

Claims 19 through 28 stand rejected. Claim 19 is being amended.

Specifically, claim 19 requires loading at least two different parameter sets corresponding to different images into an imaging device. In particular, software implemented in the imaging device downloads a first parameter set and a second parameter set of at least two different parameter sets into the imaging device. The first parameter set contains at least one parameter that corresponds to one of the multiple images, and the second parameter set contains at least one parameter that corresponds to another of the multiple images. The software includes a pointer that points to the head of a parameter table to identify the first parameter set, and first image data of a first view of a patient is collected according to the first parameter set. If the collection of the first image data is completed as specified in the first parameter set, a delay period is dynamically adjusted and the collection of the first image data is stopped for the delay period. The pointer is then indexed to the second parameter set, and second image data of a second view of the patient is then collected according to the second parameter set. The first and second image data are processed to produce multiple images of the patient.

Stopping for a dynamically adjustable delay period before the pointer is indexed to the second parameter set to identify subsequent image data to be collected offers certain benefits and advantages. For example, the delay period can be adjusted to correspond to the time it takes for a patient to exhale and inhale and then hold his or her breath between the acquisition of raw image data

for different orientations, such as a horizontal view versus a previous vertical view, while the patient remains at the same location. The raw image data can then be processed into final images. Alternatively, the delay period can be dynamically adjusted such that image data for a different orientation can be taken immediately after taking image data for a previous orientation while the patient holds a single breath and remains at the same location, such that the patient needs to hold his or her breath only once while image data for multiples views are taken.

Unlike convention MRI systems, the present invention facilitates carrying out a plurality of views using different sets of parameters which are separated by the adjustable delay period and storing the image data corresponding to each view in designated memory locations so that a image processing module can, upon completion of the scan sequences of the views, process the image data for each of the views. In particular, the present invention downloads all sets of at least two different parameter sets and then executes the pulse sequence and acquires image data for both sets of parameters to generate multiple images of the patient

After entering this amendment, claims 19 through 28 remain pending. Reconsideration of this application in view of the above amendments and the following remarks is respectfully requested.

Claim Rejections under 35 U.S.C. § 103(a)

Claims 19, 20, and 22-25 have been rejected under 35 U.S.C. § 103(a) as being obvious over Applicants' admission of the prior art in view of U.S. Patent No. 5,606,258 to Hoenninger, III, et al. (Hoenninger). Claims 19, 20, and 22-25 have also been rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,657,757 to Hurd et al. (Hurd) in view of Hoenninger. Claims 26-28 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hurd in view of Hoenninger and further in view of U.S. Patent No. 5,363,844 to Riederer et al. (Riederer). Claim 21 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' own admission or Hurd in view of Hoenninger and further in view of U.S. Patent No. 4,875,485 to Matsutani (Matsutani). After careful consideration of these rejections, Applicants traverse.

Regarding Hurd, that reference discusses a method that merely loads a pulse sequence parameter, executes a pulse sequence, separately processes and stores the acquired image data, and loops back to repeat the steps for a next pulse sequence parameter. This loop is repeated until each pulse sequence is executed with its particular set of stored parameters. The system waits for a particular time period after all the parameters have been identified and read from a table.

The Examiner concedes that Applicants' admissions or Hurd do not disclose downloading a first parameter set containing at least one parameter that corresponds to one of the multiple images and a second parameter set containing at least one parameter that corresponds to another of the multiple

images, pointing to the head of a parameter table to identify the first parameter set, collecting first image data according to the first parameter set testing to determine if the collection of the first image data is completed as specified in the first parameter set, and if the collection is completed, dynamically adjusting a delay period and stopping the collection of the first image data for the delay period, as now required by amended claim 19. Claim 19 further requires indexing the pointer to the second parameter set and collecting second image data after the delay period according to the second parameter set, and processing the first and second image data to produce said multiple images of said patient.

The Examiner states that Hoenninger teaches the features of Applicants' invention missing in Applicants' admissions or in Hurd. Hoenninger, however, discusses acquiring multiple image data for a series of measurements of a given pulse sequence. Specifically, Hoenninger's technique requires the use of the *same set of sequence parameters* for the acquisition of the multiple image data. On the other hand, Applicants' invention, as now recited in amendec claim 19, requires downloading at least two *different parameter sets* and then executing the pulse sequence and acquiring image data to produce the multiple images of the patient.

Since Hoenninger requires the use of the same set of parameters to generate multiple images of the patient, Hoenninger teaches away from Applicants' downloading of at least two different parameters before acquiring

image data to produce multiple images. Hence, there is no motivation to combine Hoenninger with Applicants' admissions or Hurd.

Accordingly, Applicants' admissions or Hurd, alone or in combination with Hoenninger, do not render the invention as now stated in amended claim 19 as obvious. Therefore, reconsideration of the rejections under 35 U.S.C. § 103(a) and allowance of claim 19 is respectfully requested.

Because neither Riederer nor Matsutani overcomes the deficiencies of Hurd or Hoenninger, and because claims 21 through 28 depend, directly or indirectly, from amended claim 19, the reasons for allowance of claim 19 apply as well to the dependent claims.

Conclusion

In view of the above amendments and remarks, it is respectfully submitted that the present form of the pending claims (claims 19 through 28) are now in condition for allowance. If the Examiner believes that personal contact would be

advantageous to the disposition of this case, please contact the undersigned Attorney at the earliest convenience of the Examiner.

Respectfully submitted by,

Dated: Feb. 20 2006

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